

## II. REMARKS

### A. Introduction

Claims 23, 30 and 31 are currently pending in the present application ("Application"). Claims 1-22 have previously been canceled.

Previously presented claim 23 is distinguished over the cited prior art. New claims 30 and 31 have been added and are also distinguished over the cited prior art. No new matter has been introduced.

### B. The Subject Claims

The subject claims recite a device and method for processing a bit map wherein a grid that divides said three-dimensional space into a plurality of cells is defined, and each of said cells includes information that denotes whether its center exists inside or outside of the subject solid shape.

If such bit map data are used for processing, the following new problems are caused.

- (1) Data size usually becomes large; and,
- (2) No feature-related information (geometrical properties of a shape) is available.

*See Application at 3:16-22.*

So that, according to the present application, the following functions (or corresponding steps) are crucial.

In a plurality of different coordinate systems wherein said solid model is described, a function for receiving a definition that an area occupied by one of said plurality of different coordinate systems overlaps with a part or whole of an area occupied by another coordinate system; and

a function for converting said solid model to its solid shape data with use of said defined plurality of different coordinate systems.

In other words, according to the subject invention, using converted solid shape data instead of bit-map data, resolves the above problems.

**C. The Subject Claims Are Distinguished From Wainwright**

Claims 23-29 are presently rejected under 35 U.S.C §102 as being anticipated by U.S. Patent No. 6,889,374 (“Wainwright”). Office Action at 2.

Generally, the invention of the present application and Wainwright have very different purposes. The present application begins with a solid object to be modeled. That solid object is described using a bit map that is then reduced in size and manipulated as desired. Wainwright, on the other hand, does not begin with a solid object but instead creates images “from scratch” for use in animation or the like.

There are at least two reasons why Wainwright does not anticipate the present claims.

**1. Wainwright Does Not Disclose The Use Of A Bit Map**

The present claims all recite the use of a bit map to describe a solid object in a CAD/CAM system. *See* claims 23, 30, and 31; *see also* FIGS. 1(a) and 1(b). The present application provides support. Application at 15:24, *et seq.*

In contrast, Wainwright does not describe the use of a bit map but instead discloses “a mechanism for incorporating user input modes in a scripting language.” Wainwright at 3:57-58. It also teaches that the user can create graphical objects in a CAD system. *See, e.g., id.* at 4:39-49, *et al.* However in Wainwright, the object for processing is not a *bit map* as claimed in the present application. In fact, bit maps are not even mentioned, which is not surprising, given the

very different purposes of the two inventions. The process of the present application begins with a solid object to be modeled. Wainwright, on the other hand, uses “context blocks” to create images “from scratch” via the use of a GUI. Wainwright at 3:58-67. Accordingly, for at least this reason, Wainwright cannot anticipate the present claims.

2. Wainwright Does Not Teach Converting A Solid Model To Solid Shape Data

Furthermore, Wainwright does not disclose the function of converting a solid model to its solid shape data as recited in claims 23, 30, and 31 of the present application. As mentioned above, Wainwright does not begin with a solid object to be modeled but creates objects from scratch for use in animation or other video. Logically, then, Wainwright cannot teach the conversion of a nonexistent solid model to solid shape data.

Accordingly, it is clear that the subject claims are not anticipated by Wainwright.

**III. CONCLUSION**

Accordingly, it is believed that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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